Roberta Tucker

Disorientation, Reorientation, A Compulsion to Explain

> There is a theory which states that if ever anybody discovers exactly what the Universe is for and why it is here, it will instantly disappear and be replaced by something even more bizarre and inexplicable. There is another theory which states that this has already happened.
>
> — Douglas Adams, *The Restaurant at the End of the Universe* (1995)

The articles in this issue attempt to better understand the specific relationship between literature and the workings of the brain/mind. It includes articles from a literary scholar and poet who examines the neurological basis of writing poetry, and from four literary scholars: one who looks at the relation between some specific poetic techniques and the functioning of certain processing systems in the brain, one who examines how bodily systems outside the brain are enlisted in the reading experience, one who uses a philosophical approach to look at the specific issue of solipsism and its treatment in literature, and one who looks at how literature is an example of a conceptual integration system that makes us distinctly human.

Some commonalities emerge: an often deliberate tampering with mental processing both conscious and unconscious, a purposeful disorientation followed by a reorientation, a link with mystic or god experiences, and a compulsion to engage in this kind of activity. The experience is almost always seen by these critics as beneficial, or potentially beneficial, although historically that has not always been the case, and even today, is called upon to be defended. The differences — and the complexity — appear in the specifics: which processes, how they are tampered with, how the writer or reader is reoriented, what kind of experiences are evoked, or provoked, why people engage in this activity. It can also be argued that the same commonalities appear in other forms of art as well, such as painting, music, etc. So another concern here is how these commonalities are linked specifically to literature's medium, language.

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Journal of Consciousness Studies, **11**, No. 5–6, 2004, pp. 5–20

Another interesting commonality that appears is a pleasurable regression to childhood and/or an ancestral past. Kane notes a return to an anterior brain state where non-laterality of hemispheres or a dominance of the right hemisphere occurs. Tsur notes a return to meaningless babbling. Esrock sees a similar potential link as a motivation for reading. Turner chooses to explicate a children's story. Hogan notes a mystic union that, although he never mentions it, many would see as a return to a Golden Age or a Garden of Eden. Tsur and Turner also add that there seems to be a need to give a rational justification for this 'non-rational' activity.

A third commonality is that where science and philosophy describe, literature evokes, provokes, makes us feel, experience things. Literature's approach is an experiential, not a logical, one. It seems to work more closely to the way we are discovering certain functions in the brain seem to work vs. the way logic (or the scientific method) works. That of course does not preclude writers, readers, and scholars from using the techniques of the scientific method to create or evaluate the literary experience. In fact, such methods are a prized way of satisfying curiosity about how and why literature works, in an attempt to make it more effective.

Why an issue on Literature and Consciousness?

Every time I go to a conference on consciousness and introduce myself as not a philosopher of mind, as not an experimental or clinical psychologist, as not a neuroscientist, but as a student of French literature, I inevitably get asked, 'Why are you here?' The answer to me is self-evident: 'Because literarians (authors, readers, scholars) have always considered literature a cognitive tool. And western literature has been increasingly self-reflective since at least the mid-eighteenth century. "Scientists" are now finally studying the same things literature does: cognition itself. Because science finally has the tools to measure what literature has been looking at phenomenologically for centuries, and literarians want to know what's been found, to measure it against what we've thought, and then to change it — some would be generous and say "be creative" — or at the very least, play with it, explore it, turn it upside down, etc.' Most people at these conferences are as intrigued by the possibilities as I am and have an equal sense that, yes, there must be a connection, but they have as much trouble determining it as I do. Why am I, and are so many, involved in such a — in the terms of current American society at least — useless and non-financially-rewarding endeavour? What does literature have to offer to consciousness studies and what do consciousness studies have to offer to literature? This issue is an effort to give a few examples. The comments below attempt to put these examples into a kind of context, because the examples themselves are only a sampling of the enormous possibilities.

The study of literature presents a dilemma for serious students of science. Like consciousness, literature, its causes and effects, have been difficult to study with the quantification and verification techniques traditional to the hard sciences. With the advent of imaging, both areas are now getting tantalizing clues, if not

yet for their functioning at the most complex levels, at least at the level of some very basic, fundamental mechanics.

Not everyone likes literature, just like not everyone likes science. As the science fiction writer Kathleen Ann Goonan has said, good literature 'is an acquired taste, but so are any of the sciences, and mathematics'. She explains how literary training functions like scientific training in enabling one to see things not always easily available to the uninitiated. And then again not all art is good, like not all science is good.

There is huge variation in the human race among those who find this kind of learning either enjoyable or useful. It would be interesting to examine the relevant factors. That might help us to discover why some people prefer one kind of interaction to the other and why many noteworthy imdividuals professionally cross over from one side to the other.

Like philosophy, literature feels free to engage in elaborate thought experiments, without even the logical restraints that philosophy imposes upon itself. And because literature is free of these constraints, it is free to experiment with ideas in ways that neither the sciences nor philosophy are. That, of course, sometimes leads to, in scientific and philosophical terms, disastrous results. Those efforts rarely survive, unless they have some other existential or aesthetic value, such as fairy tales or good Surrealist poetry.

This other value could explain why we often participate in a willing suspension of disbelief when we enter a literary world: we are getting other highly prized things out of the experience. It's the reason for the success of films such as *The Matrix* or *Maid in Manhattan* where so much is not workable in our world but where the experience of other more important (for the viewers at the moment) elements is thereby heightened. But then scientists create somewhat artifical situations for their test subjects in order to measure some localized aspect of their reactions. Weightlifters and yoga practitioners create 'artificial' situations for their bodies in order to better prepare them for and recuperate them from the 'real' world. And one does not need to be fully conscious of why or exactly how what one is doing does its job. But then that's the job of cognitive scientists.

Literature also admits it is fiction and yet claims profundity and value. How can one take it seriously? Because we understand that the brain functions by means of fictions. Everything is a translation, transposition. Chemical and electrical changes in the brain are not the flower one sees and smells. What is memory but constant reconstruction? What is the unconscious? Every abstraction is a fiction. It's why we need logic and the scientific method — to get around these tendencies. And then we take it seriously because humans engage in it, even scientists and philosophers.

None of the above means that literature (or any art form) is totally without criteria. The problem is that no one thus far, despite numerous attempts throughout history, has been able to unequivocally state them. Literature seems to obey the principle stated above by Douglas Adams. The cheese is always getting moved. That seems to be one of the cardinal principles of literature: to figure out how to

change things as soon as something is established, to be always novel, i.e., to be creative. But not to be creative without rhyme or reason (ha, ha) — there is recognizably good and recognizably bad literature. How do we know which is which when the rules keep changing? To look at the problem this way is to look at literature the way we look at diets: they're always changing, and are not at all reliable either. We need to look beyond this, which is one of the reasons for the interest in consciousness studies.

First, before looking at the articles included in this issue, I've included a few comments about literature in general, questions I've had to answer at conferences. This is included for those who have never studied literature. Everyone else may skip them.

Just like the sciences, literature is never satisfied and is always looking further for explanations. It is as creative as the sciences. It is as concerned about 'reality' as the sciences. It simply uses different methods.

It is well known that writing is used as a form of psychological therapy for people who have suffered a trauma. It helps them to work out their problem but rarely produces good literature without some other element or elements being added. This use of writing as therapy may provide a partial clue as to writing's (and reading's) much wider application for those who are not ill. As Yves Bonnefoy (1958), a noted twentieth-century French writer who started out as a mathematician and philosopher of science, states, 'It was from this direction [poetry] that I had to search for a solution to the problems of existence.'

One idea is that literature helps us to put abstract ideas into human context. We are not computers and most of us need an emotional context for abstract ideas and new relations to the world as redefined by new developments, whether in social relations, politics, science, etc. Literature helps provide that realignment.

Literature is a cognitive tool that uses language. Most literarians would not identify consciousness with language because we are so familiar with the limitations of language. Writers even use ineffability as a tool when it suits their purposes; there are several rhetorical forms that exploit this quality: litote, metaphor, paradox, etc. Language to express its own limitations. Ironic, right? Literature is not linguistics. It is not so much the study of language as the study of a particular use of language, where language is a tool, not the end product. Just as painters use paints and often carefully consider the qualities of the paint in their use, but paint is not their end product.

Despite some misconceptions (including by some writers at various times in literary history), the vast majority of literature is about avoiding, in Tim Powers' wonderful terminology, 'ghost traps'. In his literary universe, palindromes (words or phrases that can be read the same way forwards and backwards, such as 'noon', 'racecar' or 'A man, a plan, a canal, Panama') are used to trap ghosts. Ghosts get caught reading the words backwards and forwards and cannot free themselves, just like people getting caught in a text, being unable to see anything outside it. (However, see Tsur's article below. These 'traps' can also be used by literature to create specific kinds of experiences.)

In addition to the above, an example of where the sciences and literary studies can work together is illustrated by the case of Bruno Bettelheim and his book *The Uses of Enchantment* in which he recounts his work using fairy tales to help mentally disturbed children. His analyses opened up new discussions about the uses to which literature can be put, but his work needed modification because, unknown to him, and as pointed out by eighteenth-century scholar Robert Darnton (1984), his analyses were based on very modern versions of those tales, not the traditional versions which were quite different in significant ways. This would entail a marked reworking of his theories on why these tales work.

There is a tendency among some cognitive science/consciousness writers of the scientific bent to cite literature in illustration of their theories, but, in so doing, to oversimplify the literature. There is a need to be aware of its complexity and subtlety.

Literature is narration of consciousness and of cognition

Some say literature is a reflection of the history of consciousness and the changes it has undergone. Julian Jaynes (1977) is probably the most well-known example, but it is a common idea. Do the multiple levels of meaning in a literary text — the discursive, the metaphoric, the appeals to emotions, anticipation, the images, the sounds evoked, the revelations or 'aha's' — mirror the mutiple processing functions of the brain? David Lodge in his book *Consciousness and the Novel* (2002) gives a history of how English writers have changed their techniques to variously represent consciousness.

And is literature a narration of the unconscious? Witness the Surrealists' attempts at automatic writing. How many times has a reader or critic said that such and such a writer was working out such and such an unconscious impulse?

Literature is narration of cognition. David Lodge has also said, in the book just mentioned, that every novel is in a sense a *Bildungsroman*, where a character learns something. Mediaeval literature is full of debates. What are detective stories but stories about learning? What is the American television program *CSI* but narrations about scientific investigations? Who cares about the murders? They are there only as an excuse for the presentation of a puzzle and its deciphering. What is cognition if not disorientation and then reorientation?

Many current topics in consciousness/cognitive studies have links in literature. Confabulation would at first glance seem to be a natural source for much of literature. But, as will be seen in both Kane's and Tsur's articles, much of literature comes from conflation.

Phantom limbs? Ghost physics? Through the manipulation of language's ability to either refer to something outside itself or to itself, literature is expert at creating visions in your head, responses in your limbs, whether this is due to linkages with the same images in one's brain that dreams use or to reinterpretations of stimuli à la Ellen Esrock or a combination of both remains to be seen.

Literature has been studying and representing consciousness phenomenologically for a long time.

Is literature another kind of mental workspace? a sketch pad, a kind of exteriorization of thoughts, an aid for memory? another realm in which to move things around? a temporary disconnect, so that things can be looked at from a different angle?

Literature is theory of mind par excellence. It presupposes an author who is working out what he or she is thinking (and perhaps also working out what a potential reader might be thinking and how to affect it) as well as presenting characters who, theoretically, also have minds. And there is a reader who is doing the same, from the other side.

Instead of answering the question 'What's it like to be a bat?', Rebecca Ore will write a trilogy (*Becoming Alien* [1988], *Being Alien* [1989], and *Human to Human* [1990]) in which a misfit human has an easier time fitting in with a group of alien sentients than with his fellow humans, and in which a group of sentients evolved from bats rather than apes has even more difficulty. They are used to communicating in a system which is parallel rather than linear and encounter real problems adapting to a linear system.

And Julio Cortázar (1979) will write a story in which a man, by staring often enough and long enough at an axylotl, suddenly notices that he has become the axylotl. Is this an example of the deafferentation, the blurring of the sense of self, and the identification with the object being intensely observed that Andrew Newberg and Eugene D'Aquili name the active approach to mysticism in their book *Why God Won't Go Away* (2001)?

Or is this all fantasy, since there are no bases in fact? Why waste your time with it? Why is it not a waste of time for so many? We know it's silly, so we leave ourselves open. And then literature can work its magic, once the affective filter is down. We can learn the way Kanzai did. One can always be grown-up and scientific, as Tsur and Turner suggest we have a tendency to want to do, and ask oneself why are so many of those *other* people vulnerable to this? That would make this study socially acceptable.

Literature can act as the same kind of social mirror as a parent for an infant, a mentor for a student, a peer for another.

Literature changes with science

Guy de Maupassant, a very intelligent atheistic writer, in his story of 'The Horla' (1887) explicitly pits a very sophisticated understanding of the best scientific thought of his day against 'fantastic' explanations in his efforts to discover the nature of some unusual phenomena. He very carefully shows the limitations of each kind of explanation. And he very carefully shows how, phenomenologically, each makes equal sense as he struggles to discover the 'truth'. Tim Powers, a current writer, does something very similar (Powers, 1992; 1996; 1997). Why would a writer who doesn't believe in the supernatural use it in his work? He wants to make an existential statement, not give a scientific explanation, although he very definitely does that as well by demonstrating one view of how and where scientific explanation fits into our lived lives.

As our ideas about who we are and what our world is change, literature changes. When studies in light and in perception were making great progress in the nineteenth century, painters like Monet changed their techniques. And writers started changing their techniques as well. Flaubert doesn't tell us that Félicité saw something she had never seen before, horses being lifted by pulleys and harnesses onto a ship. Instead he writes: 'She went all round the harbor basin, full of ships, and knocked against hawsers; then the ground fell away, lights flashed across each other, and she thought her wits had left her, for she saw horses up in the sky.' Only after giving us the character's reaction to what she first believes she sees does he then give us the view of someone who can put the vision into rational context, that the horses were being lifted onto the ship by tackles. As a result of the new technique, the reader reacts with the character rather than initially looking down on her. Later writers exploit this technique even further, presenting readers expecting rationally interfaced left-hemispheric presentations with puzzling enigmas or what seems at first to be nonsense. Upon analysis, we discover we are being presented, in words, with something normally seen at a stage in cognition prior to verbalization.

Today's new readers, used to music video and video games, have an easier time understanding these texts than prior generations used to linear, logically-managed verbalization. Verbal 'logic,' in some vein, is following visual logic.

According to Whitehead, the hardest conceptions are the scientific, rational ones.

Literature changes us

We are getting tantalizing hints that somehow children's doing art and music in school changes their brains and/or their ability to learn. Learning to read, to write, and learning a foreign language seem to do the same (see Kane's article). Then, one may ask, how does becoming a *sophisticated* reader, one who can deal with either scientific journal articles or complex literary texts, change the brain? What does becoming conscious of formerly unconscious processes do? The French poet Yves Bonnefoy once said that we live, not at the level of our molecules, but with our existential selves. But as we become more and more aware of that other part of our selves, we are making it and writers are using it as an existential part of our selves. Douglas Adams' world keeps changing.

A few scattered conferences have taken place addressing the issues of Literature and Cognition/Consciousness, such as the conference on Thinking the Brain and Beyond put on by the Society for Literature and Science in 1998, a conference on Narrative and Consciousness: Literature, Psychology, and the Brain in 1999, and one on The Work of Fiction: Cognitive Perspectives in 2001. The Modern Language Association has an official discussion group on Cognitive Approaches to Literature. There are some websites, including some online journals such as *Consciousness, Literature and the Arts*. A number of scholars are establishing reputations as innovators in this field. Books are being published. *Poetics Today* has dedicated a large number of articles to the subject, including their Spring 2002 issue. The *Stanford Humanities Review* did the same in 1995

with an issue called Bridging the Gap: Where Cognitive Science Meets Literary Criticism (see also Hobbs, 1990). Work on the subject has progressed within literature especially under the labels of reader response theory, autobiography and memory, and literature and the body. A lot of work in the past occurred before the current terminology, under the labels of epistemology, hermeneutics, aesthetics, and rhetoric, for example. Many creative works have appeared: David Lodge's *Thinks* (2001); Kathleen Ann Goonan's *Queen City Jazz* (1994), *Mississippi Blues* (1997), *Crescent City Rhapsody* (2000), and *Light Music* (2002); Neal Stephenson's *Snow Crash* (1992) and *The Diamond Age* (1995); Alexander Jablokov's *Nimbus* (1993); to name a few.

Literature's main playing field is the human brain. And our main tool is human language. For the most part, we currently operate off of bits of black ink on mostly white paper. Although we also use sound waves and actors, and we are currently experimenting with bits of film and digital encodings. When science has new technologies for studying the brain, we're interested. When philosophy has new theories about how the mind and the brain work, we're interested.

The Articles

Julie Kane in her 'Poetry as Right-Hemispheric Language' gives the account that perhaps most explicitly links current neurological study and the production of literature. She presents a survey of studies which indicate that a number of linguistic functions usually correlated to verbal structures in poetry, such as metaphor, allusion, personification, synecdoche, paradox, connotation, assonance, etc., are or can be controlled by the right hemisphere. She then shows how research indicates that many linguistic functions become lateralized as a result of learning to read; that they don't exist as lateralized functions before literacy is achieved. This process seems to lead to '*qualitative changes in consciousness*', and she gives potential reasons for the differences between print and oral cultures. She proposes a hypothesis 'to account for why poets, in particular, produce language so rich in right-hemispheric features'; i.e., that poetry might be written by persons 'subject to temporary reversals of "normal" laterality.' There are indications that this reversal occurs during dreaming, and it can often occur in affective disorders. In the manic state, normally left-hemispheric dominant people become right-hemispheric dominant as far as language processing is concerned. A statistically larger number of poets than people in the normal population have a history of mental disorders. She speculates that, as in the above situations, there might be lesser callosal activity resulting in a removal of inhibitions placed upon the right hemisphere which then communicates its results in a flood to the left. She then wonders if the oft-cited compulsive need to write might not be 'a self-prescribed remedy for the discomfort of an overactive right hemisphere; restoring normal laterality by channeling linguistic function back from right to literate left'.

One might also ask, if writing is a 'self-prescribed remedy for the discomfort of an overactive right hemisphere', what happens to the reader?

Reuven Tsur in his 'Visual and Auditory Ingenuities in Mystic Poetry' seeks to link specific literary techniques in a particular kind of poetry to the evocation of certain experiences. He also sees a 'change in consciousness', this time on the part of the reader. '[M]ystic or religious poetry not just formulates mystic or religious ideas; it somehow converts theological ideas into religious experience, by verbal means. It somehow seems to reach the less rational layers of the mind by some drastic interference with the smooth function of the cognitive system, or by a quite smooth regression from "ordinary consciousness" to some "altered state of consciousness".' In this article, Tsur looks at specific techniques designed to shock us, to make us reorient ourselves, and surmises how they revert us to childhood babbling, a state of paying attention to the concrete, 'arbitrary' sounds of words rather than their referents. In literature, this is done within an adult, socially acceptable context. He delineates in some detail stages in the use of verbal imagery, where their potentialities for disrupting cognitive functioning can be exploited. He tries to show close ties between verbal use and the unconscious mind. 'Cognitive poetics assumes that the response to poetry involves adaptation devices turned to aesthetic ends.' Multivalent connections can be developed, within which we can achieve a state of mystic union. 'A sense of insight occurs when multiplicity is suddenly perceived as unity.'

Ellen Esrock looks at a specific kind of bodily response in readers, who in a text are confronted with a situation different from the one in which they currently find themselves, that of reading.

Ellen Esrock explores somato-viscero-motor responses in readers, distinguishing between more commonly noted 'simulations', in which readily identifiable bodily activations are seen, as if the reader were in the real-life situation described in the text, and a less familiar form she terms 'reinterpretations', in which other bodily activations, not normally recognized as a feature of the suggested activity, are engaged and re-interpreted as components of those actually engaged in the 'real' situation. In both cases, the physical responses are projected into the text. Using as an example a selection from Calvino's *The Form of Space* in which the narrator recounts a physical sensation claimed to be unlike any the reader, or any animate being, has ever experienced, she shows how the author, through various techniques, prompts the motivated reader to engage in those physical activities and sensations. Esrock then delineates the various bodily systems that seem to be engaged and specifically explains how the reader's breathing and pulse, for this particular text, can be reinterpreted in order to 'understand' the unfamiliar aspects of the sensation depicted. She speculates on the motivation for such engagement, on the possible mechanisms for 'mis-' or 're-' interpretation, and proposes possible answers to the question of why a reinterpretation rather than a simulation is posed, including the hypothesis of 'efficiency'. To the question why a particular bodily situation would be chosen to be reinterpreted as another particular situation, she draws parallels between studies made in linguistics correlating certain bodily systems with particular linguistic architecture. She also indicates that there seems to be variation among readers in

the degree of such response to texts. Esrock then goes on to suggest that one study the differences between *trained* versus *competent* readers in order to learn how to enhance the reading process.

Can these re-interpretations between the body and an outside world go further? In Mark Turner's blending, we will note some of the same conflict between various inputs and their resolution that we noted in Esrock but in a different context.

Mark Turner in his article 'The Origin of Selkies' gives an extended example of a model for human cognition called 'double scope' blending, the most complex part of a general conceptual integration theory that he developed with Gilles Fauconnier. Double scope blending goes beyond animal conceptual blending and is characterized by 'inputs with different (and often clashing) organizing frames' mixing in a way in which parts of both inputs become the new input and parts of both frames become the new frame, with the resultant new structure having emergent properties of its own. Clashes between the two frames and the two inputs lead not to a blockage but rather to creativity in the final blend. (A disorientation turns into a reorientation?) Examples can be found in all realms of human thought; the example he gives us here is drawn from a children's book. His insistence that the process is fun, and therefore it's not necessary that it be 'real', and his discussion of it as a phenomenon in which usually the result — but not the process — is conscious, ties in with some accounts of the evolution of literature. He adds that we supply 'rational' explanations, such as cause/effect, to give the whole further acceptance. One learns things useful for outside the blends while engaged in the blends. Turner also states that : 'Disintegration is a routine part of integration networks,' suggesting that perhaps every integration network also includes a disintegration network, a network or blend in which the inputs, rather than being fused, are instead placed in the company of the others: our selves can be placed next to each other. The story Turner analyses is itself also included in a frame, hopefully allowing a further integration of the story as a model lesson for the reader, encouraging further blending, this time of the child-reader with the children in the story. 'Through double-scope blending, fiction can deliver truth, with salutary influence on our lives.' He then concludes by relating conceptual integration theory to other theories in the area of consciousness studies — theory of mind, of language, of memory, and of consciousness — seeing it as fundamental to all of them.

Turner sees us, in our skill with conceptual blending, as easily supposing minds in not only people but animals and objects around us. Hogan will look at this phenomenon from the other side of the coin. What happens when we see others as having minds with which we cannot fully communicate?

Patrick Colm Hogan in his 'Literature, God, and the Unbearable Solitude of Consciousness' uses a philosophical approach to discuss the problem of the isolation, the loneliness, the incommunicability of the first-person experience of consciousness and literature's role as a defence against it — not through its

literal sharing, but through its evocation within the reader and its management through an indicated resolution, both thematically and through literary techniques. He argues that this isolation, the inability to completely communicate one's first person experience to another, is central to art. He then examines the philosophical issues of solipsism and doubt, showing their emotional versus their intellectual consequences. He argues that we understand and respond to emotions on the basis of prototypes, and that narrative structure is based on these prototypes. This structure foregrounds, explores, and then resolves the loneliness of the solitude of consciousness. Noting that one of the major prototypes is romantic love, and giving examples from both Western and Eastern literature, Hogan, in his analysis, then notes how the idea of romantic love is closely linked to ideas about spirituality, that the idea of being reunited in an afterlife is to 'diminish the grief of mortal loneliness'. The idea expands to religious belief in an afterlife characterized by consciousness being shared with a divine being. 'The idea of God is perhaps our primary defence against the pain of existential loneliness.' Tales of union with God use the same narrative structure as the romantic tragi-comedy. 'The peculiar solitudes that result from consciousness and self-consciousness are a crucial source for our sense of spirituality, for spirituality helps us suppress the pain of those solitudes.' At this point Hogan cites the poet Basho who 'argued that the aesthetically definitive property of a poem, the quality that gives it literary value, is *sabi*, loneliness'. The poem 'promotes a sense of peace in connection with loneliness'. 'It is a matter of loneliness that has somehow been resolved.' Existential loneliness can be assuaged by our feeling we are in a character's consciousness. This illusion is assisted by the fact that there is no real person there which could exclude us. He adds that religions provide beliefs to counteract our loneliness, but literature provides 'imaginations that give emotional force' that engage us. Literature stimulates the imagination through concrete images that work in the brain in a way very similar to actual experience and then manages that experience.

TO BE READ AFTER READING THE ARTICLES

How writers nuance, subvert the above, or The Douglas Adams Factor

As the authors of the articles mentioned above would themselves state, for everything said above, we can find a writer who, basing his or her work on those principles, contradicts them, goes around them, to create something new. Extending Turner's model, they create a new blend with new emergent structures.

Kane indicates that a greater proportion of poets suffer from ***manic disorders*** than the general population. But, as she also states, many don't. It would be interesting to see if there is a difference in writing between those who suffer from these disorders and those who don't. Can or do these non-affected writers imitate or mimic these states? Or is there something else entirely at work in them? For example, a very good writer often exploits and reverses the 'normal' effect of

linguistic functions. Charles Nodier (1961/1821), whose narrative style is often characterised as poetic, re-creates an elaborate, fluid dream sequence in his short story 'Smarra' by using hypotaxis, which is normally associated with the left hemisphere and non-poetic language, to prevent images from becoming too fixed.

And then there's the reverse. Personification or animism is not only a kind of poetic language, but a linguistic phenomenon that Pascal noted and regretted. Our language is replete with personifications — e.g., water *seeks* it own level, implying intent. A former agricultural engineer, Alain Robbe-Grillet wrote *Jealousy*, a novel in which all animism is carefully expurgated from the story and replaced with mathematical precision. (This is harder to do than one might initially think.) And all that language is presented from within the conscious mind of the protaganist, whom the reader quickly sees as an unreliable witness, as the most obsessive and emotional of narrators.

Symbolist poets in the nineteenth century initiated a major change in ***poetic rhetoric*** by modifying many of the traditional images Kane catalogs. They created mind-boggling kaleidoscopic images that don't fit neatly into lists of categories. They often based their changes on what had been discovered through modern science — studies on light, multiple perspectives, the structure of music, etc. Some of these new techniques were based on a view of language and its 'mystical' effects such as those delineated by Tsur. Synaesthesia became an important tool. Abstract and concrete categories were mixed. Through the study of etymology, authors started using secondary and tertiary meanings of words, like painting's multiple perspectives, collages, fragments to be caught by their edges. These experiments in structure, in image, and in subject matter continue today.

Although it existed before, in the nineteenth century we notice not only a compulsive need to write, but a marked increase in the need to add theoretical explanation on the part of poets and other writers. This tendency evolved to the point where there was almost a reversal and some literary critics in the twentieth century wrote theory almost like poetry. One would like to ask how these phenomena fit into cognitive/consciousness schema.

The productive clash leading to ***blends*** is put to extensive use by authors. The blends indicated by Turner can become exceedingly complex. Epistolary novels are an array of letters that show multiple points of view that the reader has to reconcile. Sometimes those same novels have prefaces or epilogues that contextualize or even contradict the contents of the letters themselves, leading to further clashes. George Sand, in her *Mare au Diable* (*The Devil's Pool*), will add ethnological documents to the end of a traditional novel, to continue the novel's story. The reader is left to form a very unusual kind of blend. Detective novels, as a genre, are a frame that entail certain expectations on the part of the reader, one of which is to be different enough to surprise. Clashes that invite blends exist at the level of technique as well — techniques like free indirect discourse, where the text slips between the 'consciousness' of the narrator and that of a character, and the changes in rhetorical devices already mentioned above. Some would say it is in the nature of literature to constantly push the envelope of frames, pushing the 'transcendental ego' one step further.

Solipsism appears in multiple forms in literature. On the most explicit level it is explored in the fantasy of mind-reading. Charlaine Harris (2001), in her humorous vampire series, shows mind-reading abilities in a small-town rural community as a definite disability. Despite our idealogical yearnings, on a practical level, she shows how it's impossible to really relax and share with others if you know too many of their thoughts. The same idea is present in Gibson's *Neuromancer* (1984). In Jablokov's, in Stephenson's, and in Goonan's works we see various kinds of mind control and, again on a practical level, how they do and do not work, because of the differences in human brains, in modifications due to time, and all those variables with which scientists are so familiar.

The practicality aside, the yearning still exists. Hogan's solitude is seen by many as central to literature. As Hogan writes, 'Indeed, we cannot even share what is important about trivial matters, for we cannot share our attitude toward these events, the little memories they release, the subtle tones of feeling they inspire.' Proust tries, with his complex layering of events and sensations. He attempts to recreate an experience the way life does, layer by layer, in the reader. This is why his sentences are so long and, to a beginning reader, why the books seem to move so slowly. Once he's built this up in you, the same lines that seemed to move so very slowly now move too fast.

On the other hand, literature not only creates a structure but, within that structure, it creates a void to be filled. This void is often considered positive. Senancour, a French Romantic writer of the nineteenth century, talked about this yearning, saying that he, like others, was initially mistaken. It is not a need for love. Love is big but love is not infinite and he needs infinity. He wants to hope and he wants to know (Senancour, 1968/1804). Note the similiarity with Hogan's statement that 'Divine *omniscience* [my italics] is a transcendental guarantee that we are not alone'. Mme de Staël (author and theoretician of society and literature, end of eighteenth and beginning of nineteenth century, the person who brought Romanticism to both France and Italy), basing her ideas on Kant, calls it the incompleteness of our destiny and names it a source of creativity. It allows us to see possibilities. Many writers and some critics see the angst as itself 'voluptuous' and 'creative'. Mediaeval writers sang bittersweet songs to the far-off lady, always just out of reach. Camus saw it as both depressing and liberating.

Hogan also writes about Basho that 'the loneliness to which he refers is a property of the poem, or of our experience of the poem, whether or not it is thematized in the poem'. Language is itself, after all, a marker for something that may or may not be currently present. It creates a shell that the reader fills or structures, à la Tsur, that disrupt processing. Some literature delights in absence as a sign of infinite potential; presence is limitation. Emma Bovary (in Flaubert's *Madame Bovary*) is disappointed when she actually overcomes her grief over the death of her mother.

Using *King Lear*, Hogan shows that the solitude is so profound that at times one can doubt one's linkage to one's own ***body***. How does this relate to Esrock's

position? Why do we have to be reminded of how the mind recruits the body in reading?

Teasers

Because, of course, this is only one issue of one journal, there are many questions about the relationship between literature and cognition/consciousness/the brain that have not been discussed here. I would like to leave us with some questions.

Would it be ironic to suggest that the right hemisphere, supposedly more geared to immediate survival in its ability to recognize emotions, to recognize environmental sounds, to match novel, fragmentary experiences to patterns, etc., should now be used for that which our modern society generally considers least necessary to our survival, for poetry? or is it? How do we use it today? for emotional balance? for exercising these skills? for music videos? for group vs. individual modulation?

To what extent is literature a re-adjustment to ever-changing concepts of our world and our relationships to it?

The solipsism of our conscious experience leads us to be lonely. We as human beings have devised ways to overcome this loneliness, a major one of which is literature. When did solipsism become a problem? Is literature a 'modern' solution, since learning to read and write changed our brains? Would previous/alternate ones have been sex, tribe, religion, ritual, song, dance, art, gardening, yoga, oral literature? Doesn't one have a feeling of oneness with the universe when making a mathematical discovery, inventing something, etc. — i.e., discovering a secret of the universe? And doesn't one share those discoveries?

Why is a need to overcome loneliness satisfied/managed by a symbolic medium such as literature? Because it is originally a need triggered by our becoming self-conscious at some point, by a symbolic division in us? Is it age or culture dependent? by the fact that we are symbolic reasoners first and scientific reasoners second?

One would like to ask how we settled on particular configurations and prototypes and not others. It's these 'received' configurations that artists in particular like to play with and change. What are the parameters, rules of this process?

Are we representationally hungry? Do we replay the same structure, because we are ineffable, as Hogan states?

Is literature providing us with new narrative structures as solutions to old problems? i.e., to the problems of loneliness? Instead of romantic tragicomedies, we now see novels with a group of people working together, as in David Eddings' novels. In science fiction, we have devices that let us not only read other human minds but identify with other kinds of minds.

Is there another kind of solipsism coming to the fore? As Senancour stated: 'It's not love, it's infinity. I want to know.' Why the fascination with works that satisfy a need for knowledge, of which we are seeing more and more in our fiction?

On the other hand, since reading and writing are usually solitary activities, to what extent does literature satisfy the need to feel special, unique?

What elements do literature, painting, music, sculpture, dance, ritual, yoga, etc., have in common and how do they differ? What differences entail in using words vs. sounds, colours, movement, to evoke?

What role does synaesthesia play?

What is the role of emotion in consciousness? à la Damasio? or à la Panksepp (2003)? What role does esthetic emotion play? In what way is beauty truth and truth beauty? Is aesthetic emotion the driving force behind human drives as Anna-Teresa Tymieniecka proposes in *The Reincarnating Mind* (1998)?

Do certain literary techniques purport to do what Kane says writers themselves do when writing, to enable not just the writer but the reader to temporarily switch hemispheres? or are there other processes at work? What enables which processes?

We all know that we are somehow and to some extent influenced by what we read. What does this constant change do to us?

> Your bait of falsehood takes this carp of truth;
> And thus do we of wisdom and of reach,
> With windlasses and with assays of bias,
> By indirections find directions out.
>
> — Shakespeare. *Hamlet*, II, i, 63

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